FIGURE 1

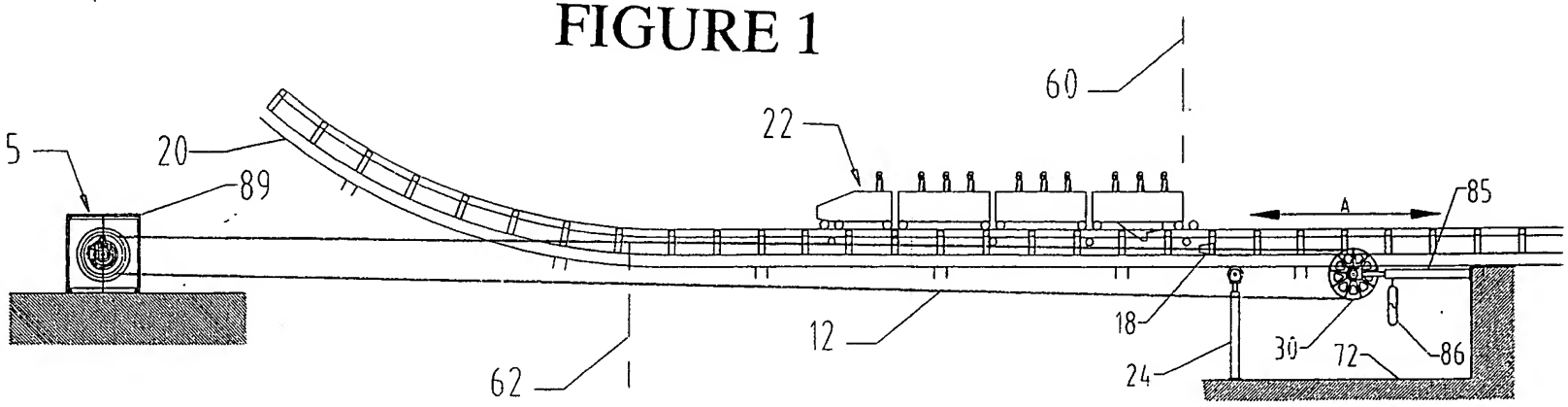


FIGURE 2

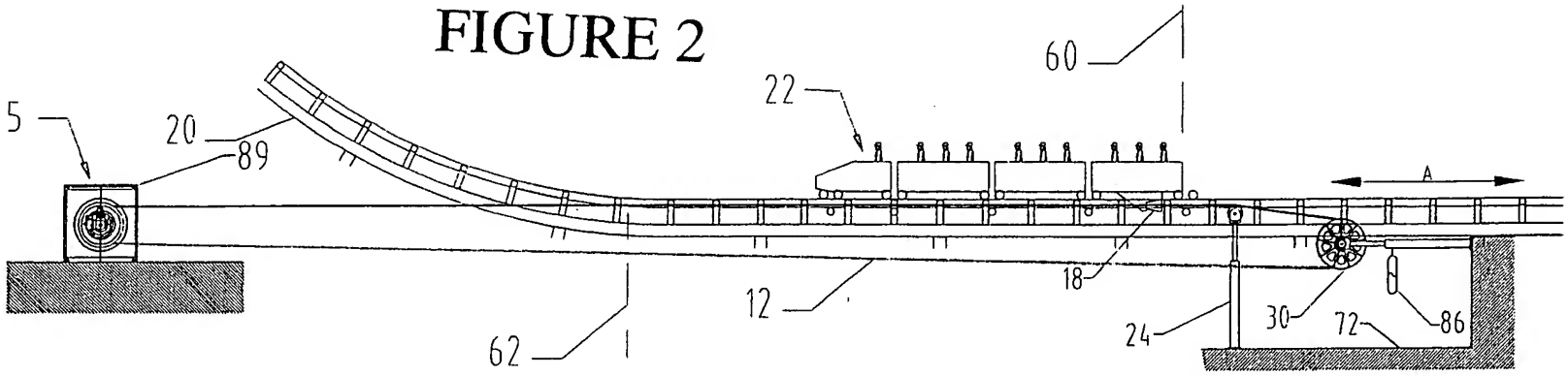


FIGURE 3

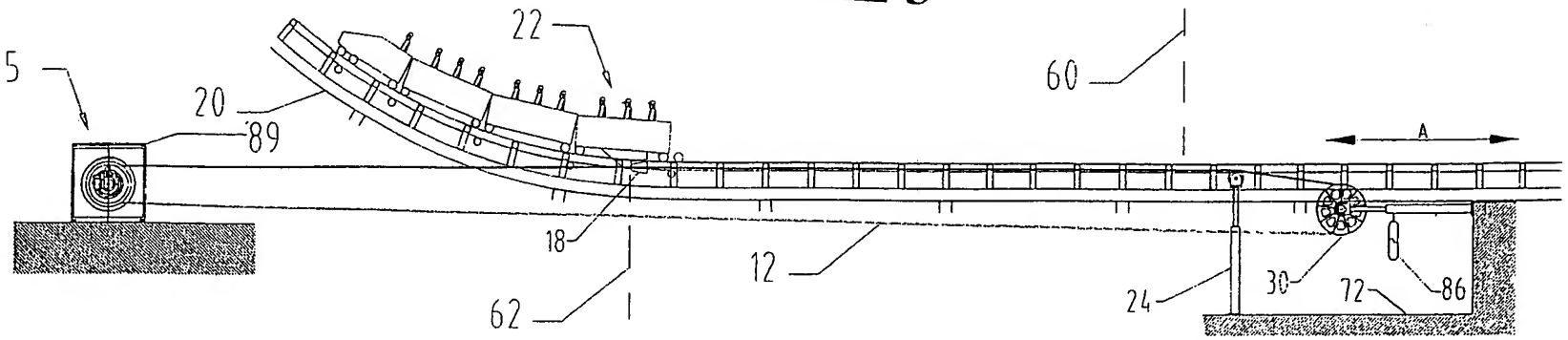


FIGURE 4

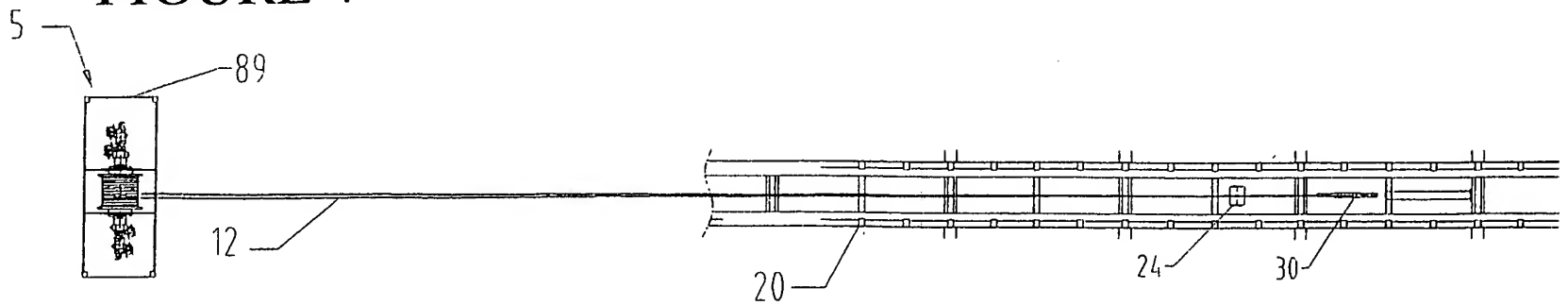


FIGURE 5

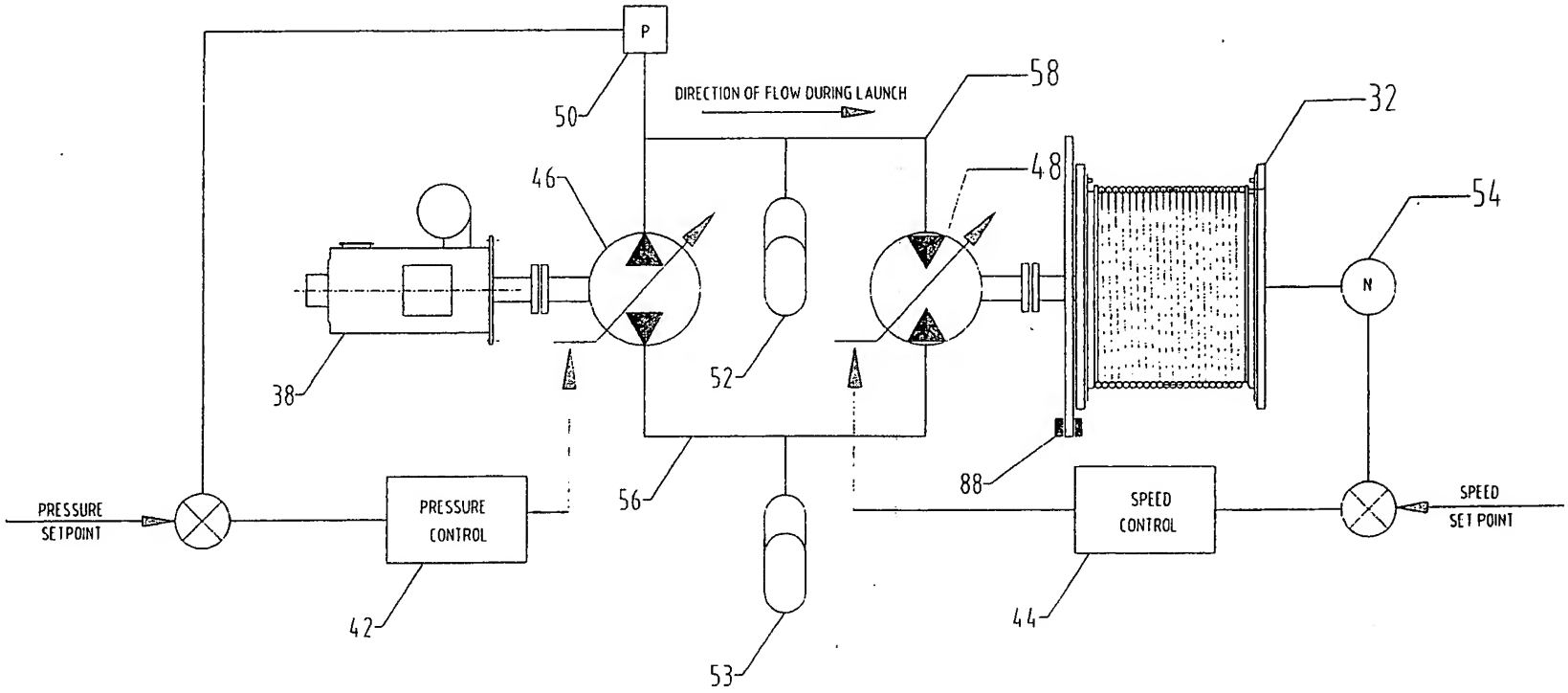

P
50
DIRECTION OF FLOW DURING LAUNCH
58
32
46
48
54
N
38
52
56
88
PRESSURE
SETPOINT
PRESSURE
CONTROL
SPEED
CONTROL
SPEED
SET POINT
42
44
53

FIGURE 6

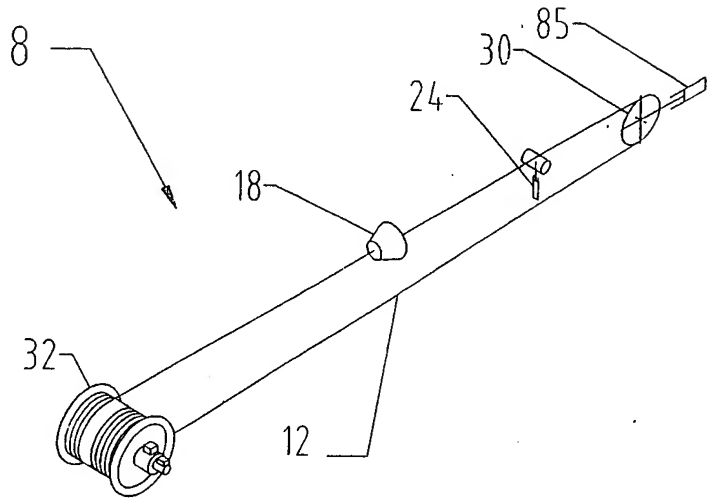


FIGURE 7

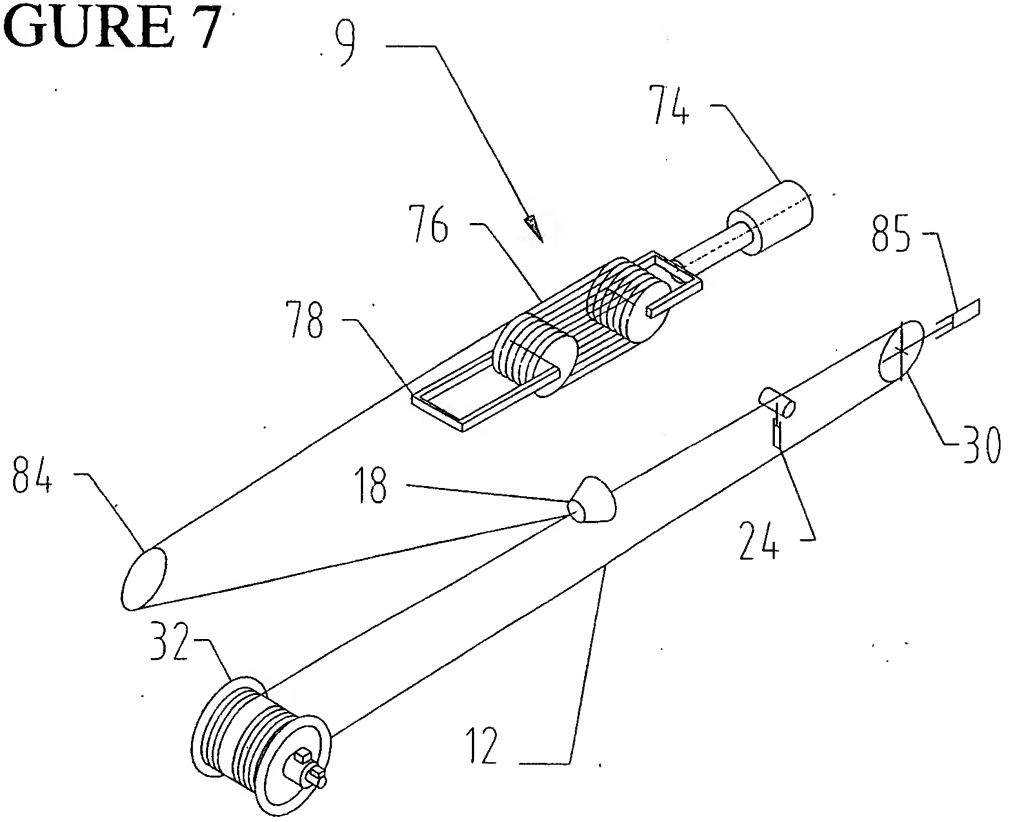


FIGURE 8

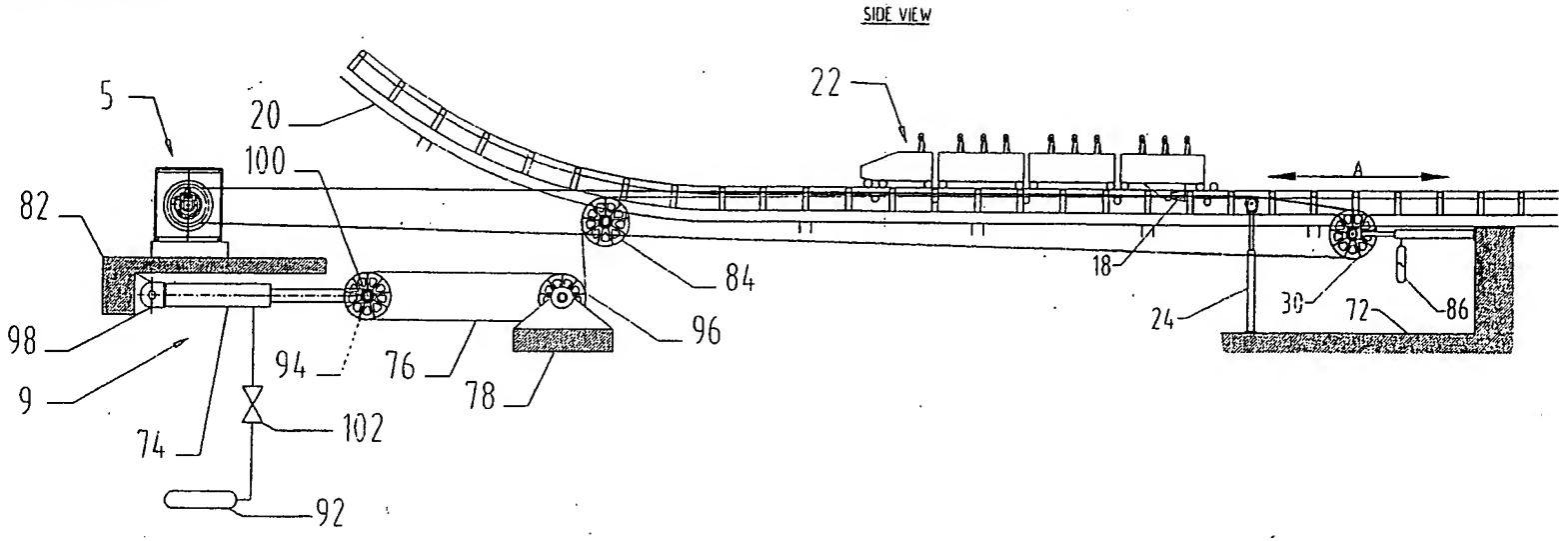


FIGURE 9

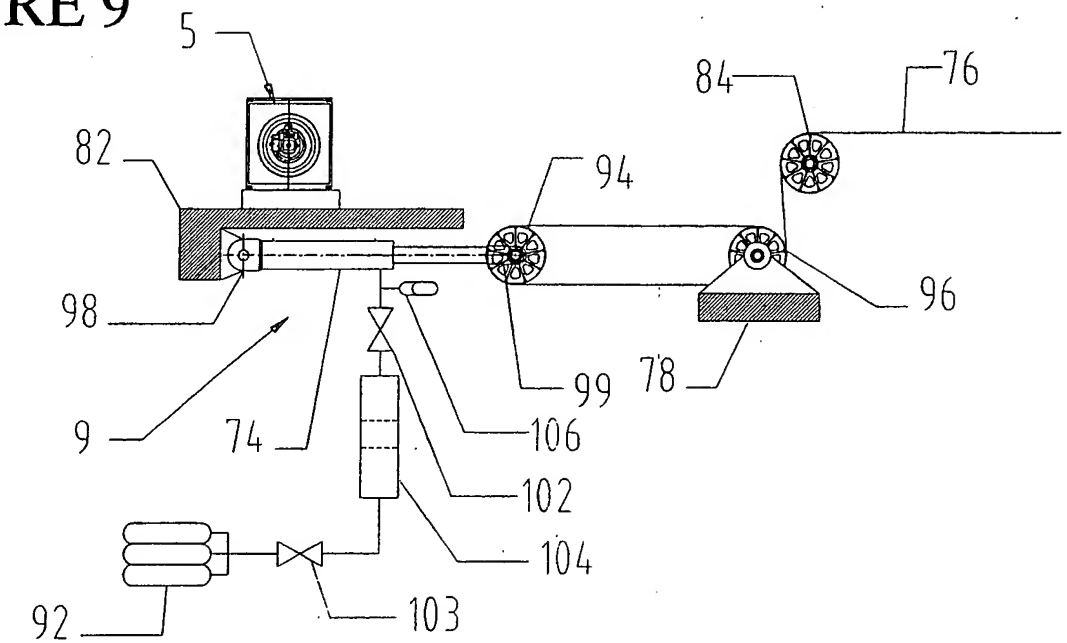


FIGURE 10

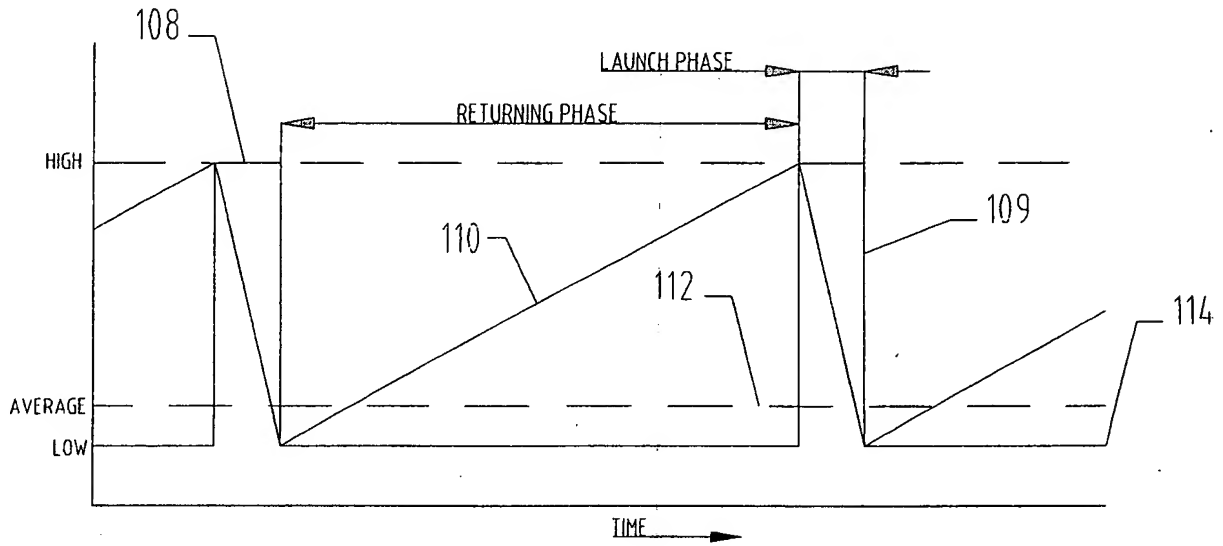
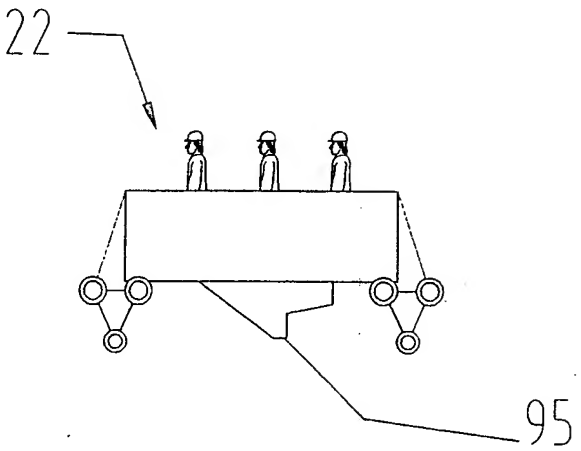

108
LAUNCH PHASE
RETURNING PHASE
HIGH
109
110
112
114
AVERAGE
LOW
TIME

FIGURE 11



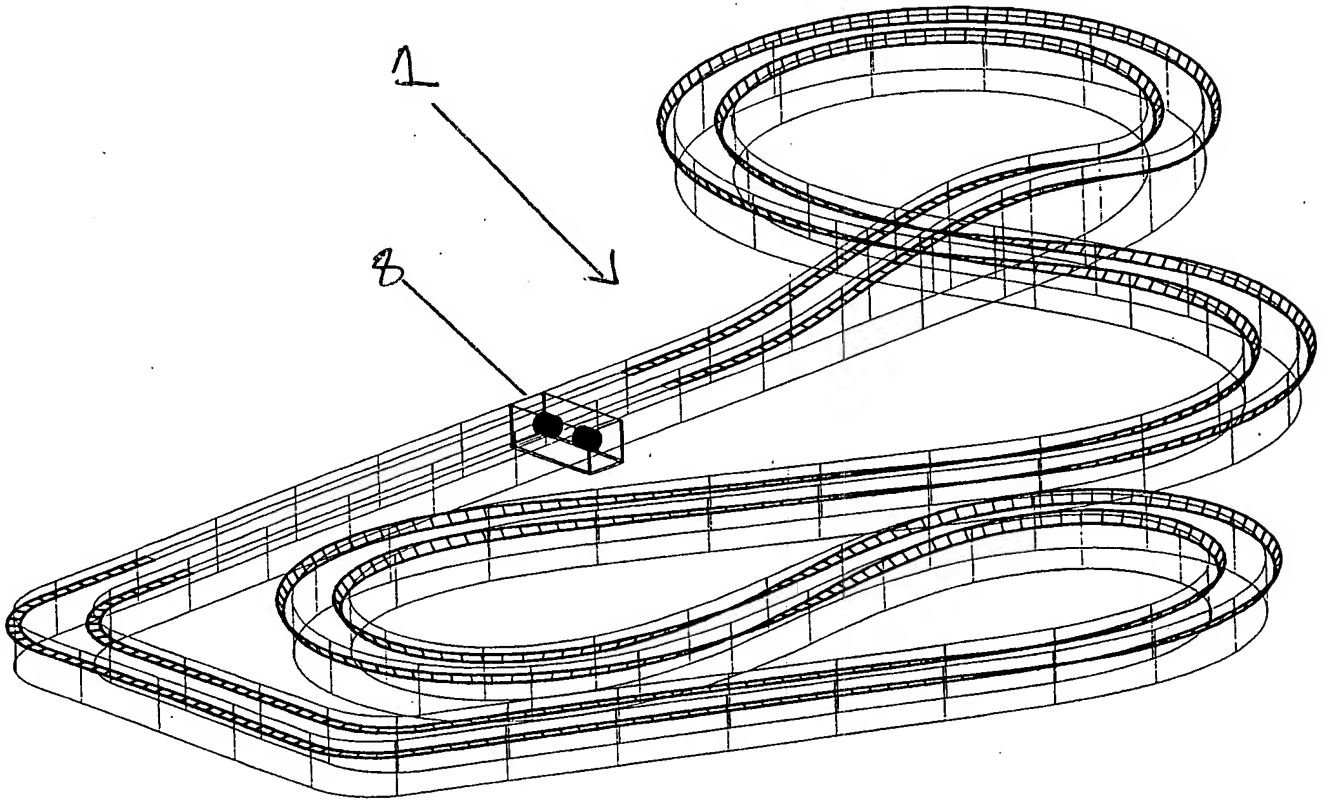


Figure 12

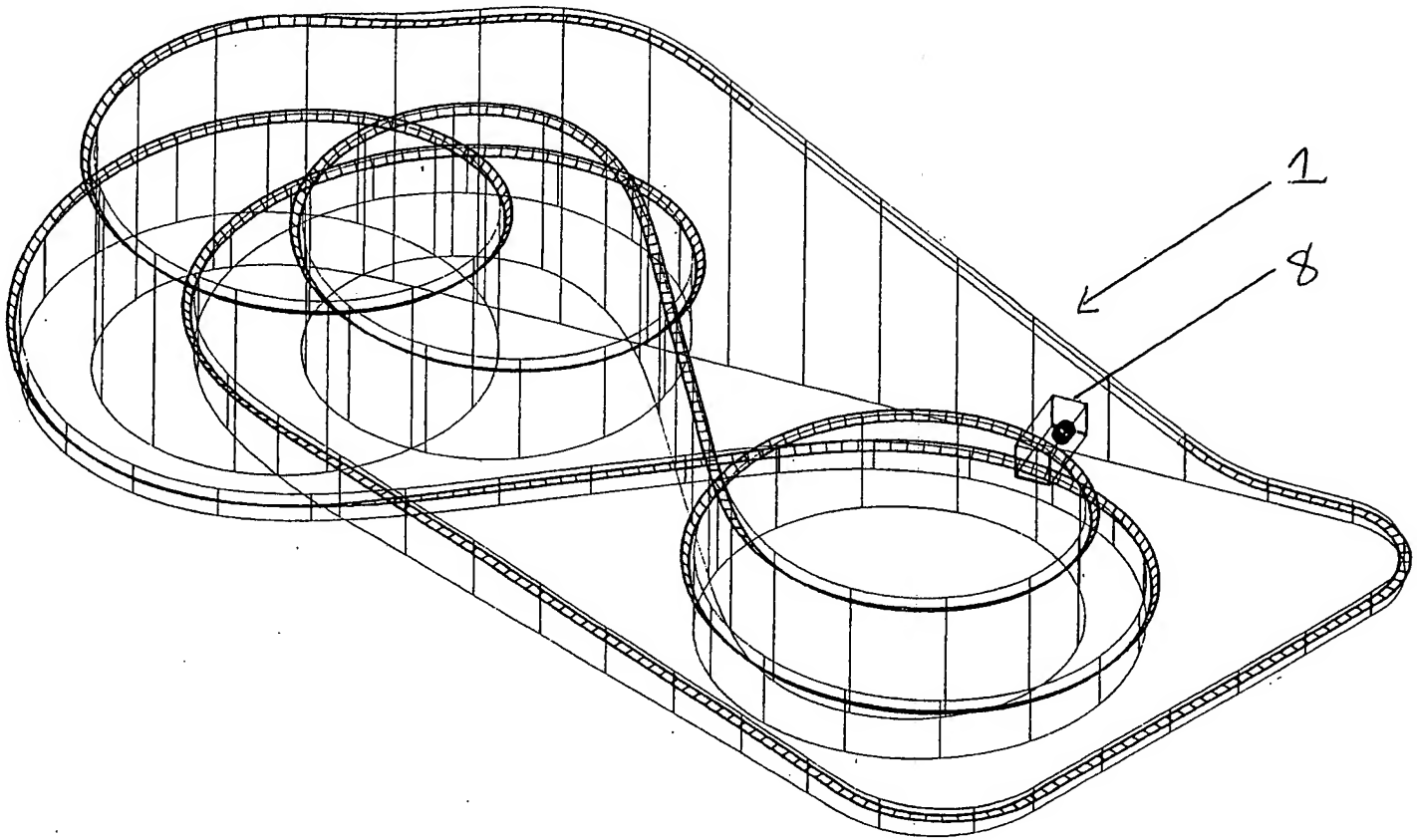


Figure 13

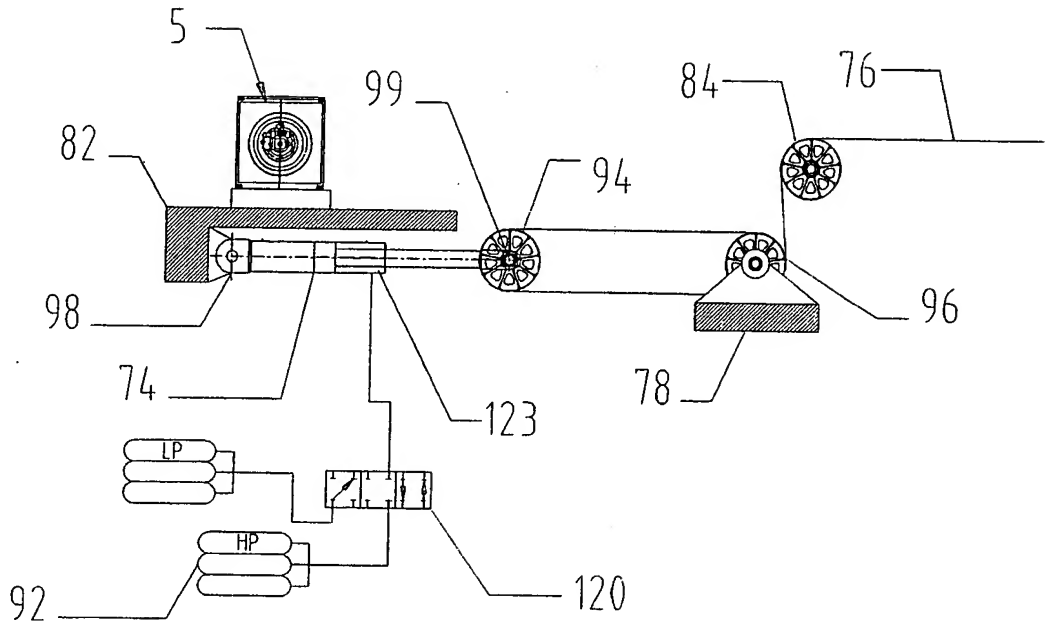



FIGURE 14